

# METAL HOUSING GROUNDING MECHANISM

## BACKGROUND OF THE INVENTION

### 5 I. Field of the Invention

This invention relates generally to a metal housing grounding mechanism and, more specifically, to a metal housing grounding mechanism that improves the anti-electromagnetic interference and anti-static electricity effect.

### 10 II. Description of the Prior Art

Heretofore, it is known that most of the memory cards for digital cameras and PDA's (Personal Data Assistant) consists a housing with a circuitry board inside, a connector is on one end of the circuitry board, metal boards are on top and bottom of the connector.

15 Memory cards are easily interfered by electromagnetic wave that can destroy the stored data or make errors while transferring data. When moving the memory card, the static electricity can be conducted through the metal boards on top and bottom of the connector to the circuitry board and break, damage the memory chips.

20 Most of the known metal boards of memory cards do not have grounding structure, the anti-electromagnetic interference effect is not so good as to prevent memory chips from damage, therefore it is better to have the metal boards connecting to ground to eliminate electromagnetic wave and static electricity.

25 Most of the known metal boards of memory cards have only one metal board connects to circuitry board, the other metal board is in simpler format and is not connected to circuitry board, therefore the anti-electromagnetic interference and anti-static electricity effect is not

so good.

Some of the known metal boards of memory cards bend downward on two sides, the scheme makes the metal boards fix inside the housing frame of the memory cards, the metal boards connect to the housing by means of the bending portion. However when the metal boards are  
5 fixed to the housing, the bending portion might not contact completely or even not contact to the housing, therefore such scheme can not achieve the anti-electromagnetic interference and anti-static electricity effect.

## SUMMARY OF THE INVENTION

It is therefore a primary object of the invention to provide a metal housing grounding mechanism to achieve the anti-electromagnetic interference and anti-static electricity effect for the memory cards of digital cameras and PDA's.

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15 In order to achieve the objective set forth, a metal housing grounding mechanism in accordance with the present invention comprises a housing, a circuit board inside the housing; a connector is on one side of the circuit board. Two metal boards are on top and bottom of the connector respectively; one of the metal boards is connected to ground. A spring tongue is installed on both ends of the two metal boards. The spring tongues of one metal board and the  
20 spring tongues of the other metal board brace together so that the two metal boards are connected and conducted together for better shield against electromagnetic wave and static electricity.

## BRIEF DESCRIPTION OF THE DRAWINGS

25 The accomplishment of the above-mentioned object of the present invention will become apparent from the following description and its accompanying drawings which disclose

illustrative an embodiment of the present invention, and are as follows:

FIG 1 is a perspective view of the present invention;

FIG 2 is an assembly view of a further embodiment of the present invention;

5 FIG 3 is another assembly view of a further embodiment of the present invention.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG 1 and FIG 2, the present invention is composed of a housing 1, a circuit  
10 board 2 inside of the housing 1, a connector 3 is arranged on one side of the circuit board 2.  
Two metal board 4 and 4' are installed on top and bottom of the connector 3 respectively  
while one of the metal board 4 is connected to ground.

A spring tongue 41 is disposed on both ends of the metal board 4 and 4'. The spring tongue  
15 41 of the metal board 4 and the spring tongue 41 of the metal board 4' brace together so that  
the two metal board 4 and 4' are connected together.

Based on above description, the two metal board 4 and 4' are connected to each other through  
the spring tongue 41 on both ends of the metal board 4 and 4'. One of the metal board 4 or 4'  
20 connects to the ground of the circuitry board 2. Thus the two metal board 4 and 4' are both  
ground to have better shield against electromagnetic wave and static electricity.

The spring tongue 41 of the metal board 4 and 4' have elasticity. Therefore when being  
molding, two spring tongue 41 brace together to prevent two metal board 4 and 4' from  
25 separating. A plastic plate 5 can further fix the two spring tongue 41 together, as shown in  
FIG 3, to make sure that the metal board 4 and 4' from bad contact situation.

